

Title (en)

Assessment of shear forces distribution at fixation points of textile-based implants

Title (de)

Beurteilung der Scherkräfteverteilung an Befestigungsstellen von textilbasierten Implantaten

Title (fr)

Évaluation de la répartition des forces de cisaillement au niveau des points de fixation d'implants à base de textile

Publication

**EP 3002580 A1 20160406 (EN)**

Application

**EP 14306543 A 20140930**

Priority

EP 14306543 A 20140930

Abstract (en)

A system for assessing the distribution of shear forces at fixation points on a textile-based implant includes a tissue model, a load simulation device, and an analysis system. The tissue model includes an upper surface defining an opening therethrough and a fixation support configured to secure a textile-based implant against the upper surface at a plurality of fixation points defined along a plane of the upper surface. The load simulation device is configured to apply a load to a textile-based implant that is secured to the tissue model. A marker is disposed on the fixation support at one or more of the plurality of fixation points. The analysis system is configured to calculate a shear force vector at each of the fixation points where a marker is disposed in response to the load applied by the load simulation device.

IPC 8 full level

**G01N 3/06** (2006.01); **G01N 3/08** (2006.01); **G01N 3/24** (2006.01); **G01N 33/36** (2006.01)

CPC (source: EP US)

**A61F 2/0063** (2013.01 - US); **G01B 11/16** (2013.01 - US); **G01L 5/00** (2013.01 - US); **G01N 3/068** (2013.01 - EP US); **G01N 3/08** (2013.01 - EP US); **G01N 3/24** (2013.01 - EP US); **A61F 2240/008** (2013.01 - EP US); **G01N 33/367** (2013.01 - EP US); **G01N 2203/0282** (2013.01 - EP US); **G01N 2203/0494** (2013.01 - EP US); **G01N 2203/0647** (2013.01 - EP US)

Citation (search report)

- [I] US 3580050 A 19710525 - WALDRON PAUL H R
- [I] GB 2389665 A 20031217 - WYKES OF LEICESTER [GB]
- [I] WO 2005054815 A1 20050616 - FAURECIA INNENRAUM SYS GMBH [DE], et al
- [I] WO 2014115130 A2 20140731 - KANADE UDAYAN [IN]
- [A] US 3807224 A 19740430 - HASSENBOEHLER C
- [A] US 2013125663 A1 20130523 - HASEGAWA KENJI [JP], et al
- [A] US 3541843 A 19701124 - FLESHER DANNY JOE
- [A] US 4677854 A 19870707 - GABELLI ANTONIO [NL]
- [A] ZIOUPOS P ET AL: "MECHANICAL AND OPTICAL ANISOTROPY OF BOVINE PERICARDIUM", MEDICAL AND BIOLOGICAL ENGINEERING AND COMPUTING, SPRINGER, HEILDELBERG, DE, vol. 30, no. 1, 1 January 1992 (1992-01-01), pages 76 - 82, XP000246241, ISSN: 0140-0118, DOI: 10.1007/BF02446197

Cited by

US10380922B2; EP3252737A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3002580 A1 20160406**; **EP 3002580 B1 20190911**; AU 2015221547 A1 20160414; AU 2015221547 B2 20200827; CN 105466789 A 20160406; CN 105466789 B 20200512; US 10168238 B2 20190101; US 2016091375 A1 20160331; US 2018202877 A1 20180719; US 9958347 B2 20180501

DOCDB simple family (application)

**EP 14306543 A 20140930**; AU 2015221547 A 20150904; CN 201510641359 A 20150930; US 201514862763 A 20150923; US 201815920614 A 20180314